

## Original Research

### Insights into Parental and non-parental Perceptions: Evaluating Screen Time Habits in Children

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#### ABSTRACT:

**Background:** The prevalence of prolonged screen time and its negative impacts on child behavior and development has become a global concern. This study aimed to investigate the individuals' insight towards screen time in children. **Materials and Methods:** This cross-sectional observational study was conducted at Defence Services Command and Staff College, Dhaka, Bangladesh among 210 individuals. Data collected using a self-administered questionnaire were analyzed with suitable statistical methods. **Results:** Of the 210 participants, 51% were females. Majority (89.5%) were in the age group of 29 to 38 years, and completed post-graduate (50.5%) degrees. Significant differences were evident between both genders regarding the perception of Covid effect on the mental health of the children (F>M, p=0.000), delayed speech in young children due to screen exposure (M>F, p=0.001), early admission to school for reducing screen time (M>F, p=0.030), and parents' screen time influencing children's screen time duration (M>F, p=0.000). Only 36.7% of the participants knew the exact screen time guidelines in children. Female respondents had a better idea than males (p=0.000). Replacement of the caretaker (40.5%), and the lockdown effect of Covid (40%) were the commonly mentioned reasons by the respondents. The predominant adverse effects were reduced physical activity (74.3%), and vision problems (71%). **Conclusion:** In this study, we conclude that most participants expressed worries about the negative impacts of prolonged screen time in children. However, they have a scarcity of knowledge regarding recommended guidelines which emphasized the need for future research and establishing national guidelines about screen time in children.

**Keywords:** Parents, Non-parents, Insights, Screen time

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#### INTRODUCTION

The technological advancements of recent decades have significantly influenced the everyday experiences of children worldwide. Nowadays the electronic screen media has become readily available to individuals of all ages, including children, teenagers, adults even the infants beyond the demarcation of the recommended guidelines.<sup>[1]</sup> Several health organizations including the World Health Organization (WHO) and American Academy of Pediatrics (AAP) have recommended guidelines for screen time use in children. The guidelines recommend that children aged two to four years should have less than one hour of screen time per day while discouraging any screen time for infants below two

years of age. Furthermore, it is strongly advised by the AAP to avoid screens during meals and to keep electronic devices like mobile phones and TVs out of children's bedrooms.<sup>[2,3]</sup> Despite the recommendations, numerous research studies have shown that the rate of using digital devices in children of different countries has been raised exponentially in the last few decades due to globally expanded powerful internet connectivity, easier ownership, alongside ready access to digital devices.<sup>[1,4]</sup> Notably, the onset age of using mobile phones seems to be gradually lower over time, and up to 50% of children aged 0–3 years use at least one device for an average of about 2–5 hours per day, which seems alarming.<sup>[5]</sup>

Screen time is explained as “time spent using an electronic screen, such as a Television, computer, or a mobile device” or “anything else that requires watching a screen”.<sup>[6,7]</sup> World Health Organization (WHO) defined ‘screen time’ as the duration of sedentary time spent passively using screen-based devices without engaging in physical activity.<sup>[2]</sup> While the focus of screen usage has primarily been on its adverse effects, literature has uncovered certain potential benefits such as exposure to new ideas and knowledge, heightened support and interaction from peers, opportunity to make new friends, good eye-hand coordination, acquiring operational skills and access to health-promoting information, among others.<sup>[8]</sup>

In contrast, the inappropriate applications of screens can be linked to addiction in children followed by multitudes of negative consequences in physical and mental health.<sup>[9,10]</sup> Parents have voiced concerns about the harmful impact of screen usage on the cognitive, language, social, and emotional development of children across multiple domains. Speech delay, social isolation, reluctance to communicate with parents, sleep disturbance, poor academic performance, hyperactivity, violent attitude, brain damage, etc. are the major concerns about the offspring, expressed by the parents.<sup>[9]</sup> The association of prolonged screen time exposure with lower levels of physical activity, and obesity has also drawn the keen attention of parents, especially after the COVID-19 outbreak.<sup>[10]</sup> The sedentary behavior of excessive screen time, insufficient physical activity, and poor sleep quality during childhood are directly linked to the development of metabolic conditions such as hypertension, heart problems, hyperlipidemia, and others in adulthood. Yet, these effects are dependent on the age of the child, the duration of the exposure, the content visualized, and the interaction between the child and caregiver during the exposure.<sup>[11]</sup>

Childhood is a critical window of opportunity to shape lifestyle behaviors and health from an early age, influencing their continuation into a productive and successful adulthood. Therefore, early childhood behavior should be crucially emphasized. While the parent-child relationship plays a significant role in a child’s cognitive development, especially in the early stages of life, isolated spending of screen time without parental control might be more harmful.<sup>[12]</sup> Furthermore, researchers have found a correlation between aberrant or excessive screen time and mental health disturbance in teenagers including depression and anxiety. As depression climbs, so does suicide, which currently ranks as the second leading cause of death among teenagers.<sup>[13]</sup> Since children possess limited cognitive abilities and basic thinking skills in contrast to adults, they struggle to comprehend the complex media output, rendering them more susceptible to the harmful impacts of electronic usage. Thus, the perception of parents and

their role in guiding, controlling, and supervising children’s screen activities is vital.<sup>[14]</sup>

According to the literature reviews, the prevalence of digital tools like smartphones, computers, and TVs has also risen significantly in developing countries like Bangladesh.<sup>[15]</sup> Nevertheless, Bangladesh lags far behind in implementing screen time guidelines and fostering healthy interactions, while numerous developed countries have already established effective prevention measures. Considering the drawbacks of extended screen exposure on children and recognizing the necessity for further exploration within the context of Bangladesh, the current study aims to explore both parental and non-parental viewpoints regarding the impact of prolonged screen exposure among children. Although almost all the studies included only the parents as their population, non-parent groups were introduced in ours considering their intellectual standards, indirect experience, and preparatory step as future parents. This study also investigated the respondents’ recommendations for preventive strategies. Comprehending their perspectives could aid in identifying areas for additional research, crafting effective interventions or advocacy initiatives by policymakers, and consequently discovering potential solutions for this emerging issue.

#### **Operational definition**

**Parents:** A father or mother, one who begets, gives birth to, or nurtures and raises a child; and a relative who plays the role of guardian.<sup>[16]</sup>

**Perceptions:** It is the process of taking in, picking, organizing, and understanding sensory information.<sup>[17]</sup>

**Prolonged screen time:** The term ‘prolonged screen time’ denotes spending over two hours per day in front of a screen.<sup>[18]</sup>

#### **METHODOLOGY**

##### **Study design and sample size**

This cross-sectional observational study was conducted at Defence Services Command and Staff College (DSCSC), Mirpur Cantonment, Dhaka which is a training institute for military officers from home and abroad. Purposive convenient samples of 210 parents and non-parents from both genders were collected from August to October 2022 using a self-administered questionnaire. The respondents were recruited through two methods, including online forms shared via Google Docs and hard copies. The inclusion criteria include (1) Individuals who are parents of children aged 1-18 years, and have direct exposure to the screen activities of their offspring (2) Individuals who are non-parents but have ideas about screen time in children (3) Individuals who have sufficient literacy to read English language (4) Individuals who provided informed consent for participation in this study, whereas exclusion criteria include: (1) Individuals who were not willing to become participant (2) Individuals who had problems reading English language.

### Research instrument

The questionnaire was structured in English and consisted of three domains namely: (1) Sociodemographic characteristics including age and gender, religion, country of origin, educational backgrounds, monthly income, occupation, nature of family, and number of kids. (2) Assessing the knowledge and perception of the respondents regarding screen time with specific questions (3) Open-ended questions to identify reasons, adverse effects, and benefits of screen time according to respondents' perspective and asking for recommendations to prevent prolonged screen time in children. Most responses were labeled 'Yes', 'No', and 'No idea' except for the socio-demographic features.

### Ethical considerations

This study was approved by the institutional review board. The respondents were assured about the confidentiality and anonymity of the information. Informed written consent was obtained from every participant after explaining the aim of the study and the consent form includes the respondents' right to anonymity, confidentiality of their data, right to withdraw from the study in any time they feel uncomfortable, and reassurance that their participation is completely voluntary and is not associated with any kind of benefit or reward.

### Statistical analysis

All the data were entered and analyzed using IBM Statistical Package for Social Sciences (IBM SPSS) version 26.0. Descriptive analysis was used to display categorical variables as percentages and frequencies while presenting quantitative data as a mean and standard deviation. A p-value of  $\leq 0.05$  was considered statistically significant.

### RESULTS

A total of 210 questionnaires were completed by the respondents. They were predominantly female (n = 107; 51%), mostly belonged to the 29-38 years age group (n = 188; 89.5%), with a mean age of  $33.4 \pm 3.3$  years, and most of them (n = 205; 97.6%), practiced Islam as their religion. Almost all participants, (n = 205; 97.6%), were Bangladeshi in origin, and the rest came from mostly other Asian countries. Among the respondents, 50.5% (n = 106) had completed post-graduate degrees, most of them were in Govt. service (n = 123; 58.6%), and 33.8% (n = 71) were unemployed. Majority of the participants, (n = 182; 86.6%) had monthly family income more than 51,000 BDT, and 84.3% (n=177) of them maintained nuclear family. Most of the parents (n = 104; 49.5%) had 1 child and non-parental participants were 25 in (11.9%) number (Table 1).

The association of the respondent's perception regarding screen time was assessed by asking

different questions directly to them (Table 2). Female respondents significantly correlated the effect of the Covid outbreak on the mental health of the children than males (p=0.000). Again, male respondents were significantly more concerned about delayed speech in young children due to prolonged screen time (p=0.001). A significant difference (p=0.030) was evident among both genders regarding the perception of early admission to school for the reduction of screen time in children. In addition, a significant number of male respondents (p=0.000) felt that parents' screen time affects children's screen time duration. Multiple perspectives were evident from different variables for the question on knowledge about international guidelines for screen time in children (Table 3). Only 77 participants (36.7%) had knowledge about international guideline. A significant number of male respondents (n = 22; 10.5%) had no idea about this guideline (p=0.000), and this was also the same (p= 0.001) in the case of govt. employees (n=23; 11%). No significant association was evident between the respondents' knowledge about the guideline and, education background, number of kids, or country of origin.

Fig 1 illustrates the reasons behind screen dependency in children according to the respondents' perspective. Replacement of the caretaker (40.5%), the lockdown effect of Covid (40%), increasing availability of the screen (37.6%), and increasing trend of the nuclear family (26.7%) were opined by the respondents as the predominant reasons. Furthermore, the respondents' awareness regarding the various adverse effects of prolonged screen time in children has been investigated in this study (Table 4). Most of the participants were concerned about reduced physical activity (74.3%), followed by vision problems (71%), behavioral problems (67.6%), obesity (48.1%), poor social interaction (42.9%), and many others in descending order.

Despite mentioning various adverse effects, a few participants claimed that there are some benefits of screen use in children (Fig 2). 41.4% of the participants viewed screen time as a source of education, and 27.1% emphasized the screen for getting updated knowledge. In addition, 32.4% of participants declared the benefit as a relief for the parents, and 10% talked about a source of entertainment. 30% of the total participants believed that there is no benefit of screen use in children. Fig 3 demonstrates the recommendation of participants to reduce prolonged screen time in children. Here, most of the participants (87.6%) believed in ensuring quality time by the parents followed by increasing social interactions (66.2%), enhancing awareness among parents (55.7%), increasing outdoor activities (48.1%), engagement in cultural activities (46.2%), and so on. Multiple responses were accepted from a single responder.

**TABLES AND FIGURES**

**Table 1: Sociodemographic characteristics of the respondents (n=210)**

Variables	Number of participants	Percent (%)
<b>Age of the parents (in years)</b>		
19-28	17	8.1
29-38	188	89.5
39-48	5	2.4
≥49	0	0
Mean age: 33.3 ± 3.8		
<b>Gender</b>		
Male	103	49
Female	107	51
<b>Religion</b>		
Islam	205	97.6
Hindu	3	1.4
Christian	1	0.5
Buddhist	1	0.5
<b>Country of origin</b>		
Bangladesh	205	97.5
India	1	0.5
Pakistan	1	0.5
Sri Lanka	1	0.5
Malaysia	1	0.5
Africa	1	0.5
<b>Educational background</b>		
Higher Secondary school completed	5	2.4
Graduate	99	47.1
Postgraduate	106	50.5
<b>Occupation</b>		
Govt. employee	123	58.6
Non-govt. employee	11	5.2
Unemployed	71	33.8
Doctor	5	2.4
<b>Monthly household income (in BDT)</b>		
≤20,000	2	1
21,000-40,000	1	0.5
41,000-50,000	25	11.9
≥51,000	182	86.6
<b>Nature of family</b>		
Nuclear family	177	84.3
Joint family	33	15.7
<b>Number of kids</b>		
1	104	49.5
2	72	34.3
3	8	3.8
>3	1	0.5
No kid	25	11.9

**Table 2: Association of respondent’s perception with selected demographic variables (n=210)**

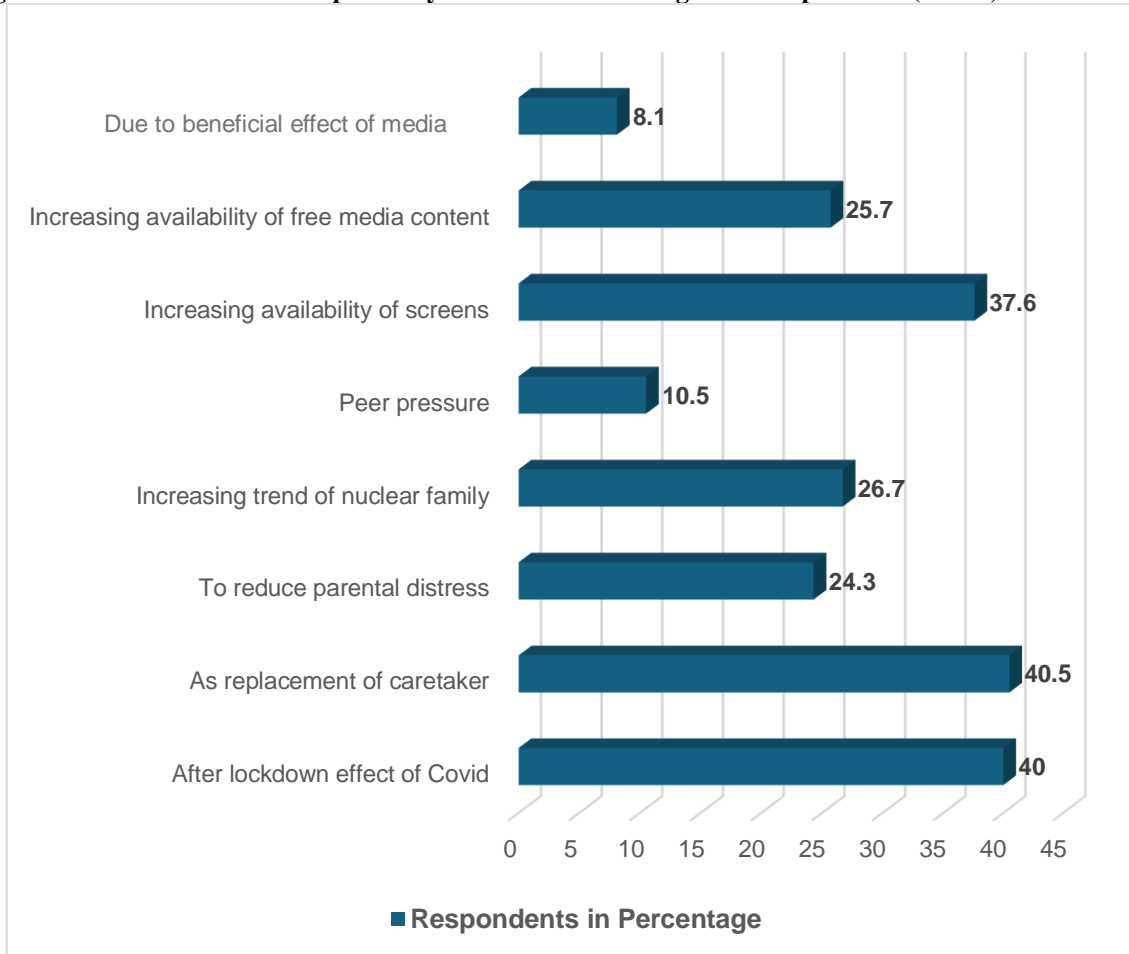
Questions	Male (n=103)			Female (n= 107)			Total n (%)	P-value
	Yes n (%)	No n (%)	No idea n (%)	Yes n (%)	No n (%)	No idea n (%)		
Do you think Covid outbreak had any effect on the mental health of the children?	36 (17.1%)	49 (23.3%)	1 (0.5%)	79 (37.6%)	21 (10%)	0 (0%)	210 (100%)	0.000*
Do you think prolonged screen	80 (38.1%)	10 (4.8%)	13 (6.2%)	60 (28.6%)	31 (14.8%)	16 (7.6%)	210 (100%)	0.001*

time causes delayed speech in young children?								
Do you think that there are adverse effects of longer screen time affecting child development?	101 (48.1%)	0 (0%)	1 (0.5%)	102 (48.6%)	1 (0.5%)	4 (1.9%)	210 (100%)	0.292
Do you feel that it is important to limit screen time in children?	95 (45.2%)	2 (1%)	6 (2.9%)	97 (46.2%)	2 (1%)	8 (3.8%)	210 (100%)	0.891
Do you think that the contents of screen time should be controlled in children?	96 (49.7%)	5 (2.4%)	2 (1%)	94 (44.8%)	7 (3.3%)	6 (2.9%)	210 (100%)	0.320
Do you feel that you should view (co-view) media with your children together for monitoring?	91 (43.3%)	11 (5.2%)	1 (0.5%)	186 (88.6%)	18 (8.6%)	6 (2.9%)	210 (100%)	0.168
Do you think early admission to school can reduce screen time in children?	73 (34.8%)	22 (10.5%)	8 (3.8%)	69 (32.9%)	36 (17.1%)	2 (1%)	210 (100%)	0.030*
Do you feel parents' screen time affects children's screen time duration?	95 (45.2%)	5 (2.4%)	3 (1.4%)	78 (37.1%)	28 (13.3%)	1 (0.5%)	210 (100%)	0.000*

**Table 3: Knowledge of the respondents about international guidelines for screen time in children (n=210)**

Variables		Yes n (%)	No n (%)	No idea n (%)	Total n (%)	P-value
Sex	Male	30 (14.3%)	51 (24.3%)	22 (10.5%)	103 (49%)	0.000*
	Female	47 (22.4%)	59 (28.1%)	1 (0.5%)	107 (51%)	
Education	Higher secondary school completed	1 (0.5%)	2 (1%)	2 (1%)	5 (2.5%)	0.076
	Graduate	27 (12.9%)	57 (27.1%)	15 (7.1%)	99 (47.1%)	
	Post graduation completed	48 (22.9%)	51 (24.3%)	7 (3.3%)	106 (50.5%)	
Number of kids	1	42 (20.0%)	51 (24.3%)	11 (5.2%)	104 (49.5%)	0.163
	2	26 (12.4%)	41 (19.5%)	5 (2.4%)	72 (34.3%)	
	3	3 (1.4%)	5 (2.4%)	0 (0%)	8 (3.8%)	
	>3	0 (0%)	1 (0.5%)	0 (0%)	1 (0.5%)	
	No kid	6 (2.9%)	12 (5.7%)	7 (3.3%)	25 (11.9%)	
Occupation	Govt. employee	37 (17.6%)	63 (30%)	23 (11%)	123 (58.6%)	0.001*
	Non-govt. employee	4 (1.9%)	7 (3.3%)	0 (0%)	11 (5.2%)	
	Unemployed	32 (15.2%)	39 (18.6%)	0 (0%)	71 (33.8%)	
	Doctor	4 (1.9%)	1 (0.5%)	0 (0%)	5 (2.4%)	
Country	Bangladeshi residents	76 (36.2)	106 (50.5)	23 (11%)	205 (97.6%)	0.429
	Overseas residents	1 (0.5%)	4 (1.9%)	0 (0%)	5 (2.4%)	

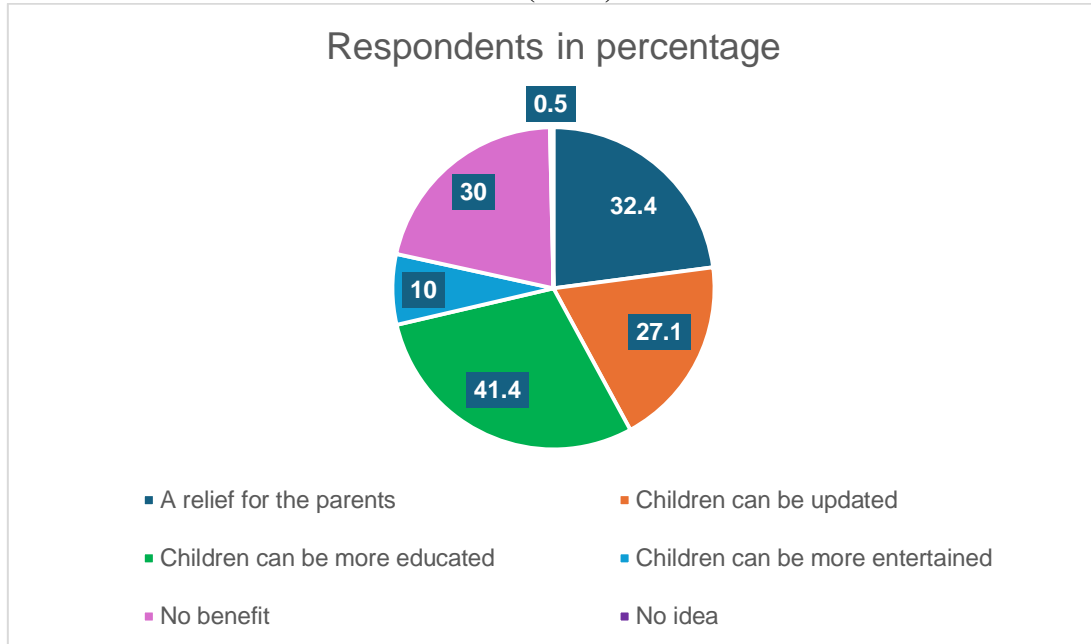
**Fig 1: Reasons behind screen dependency in children according to the respondents (n=210)**



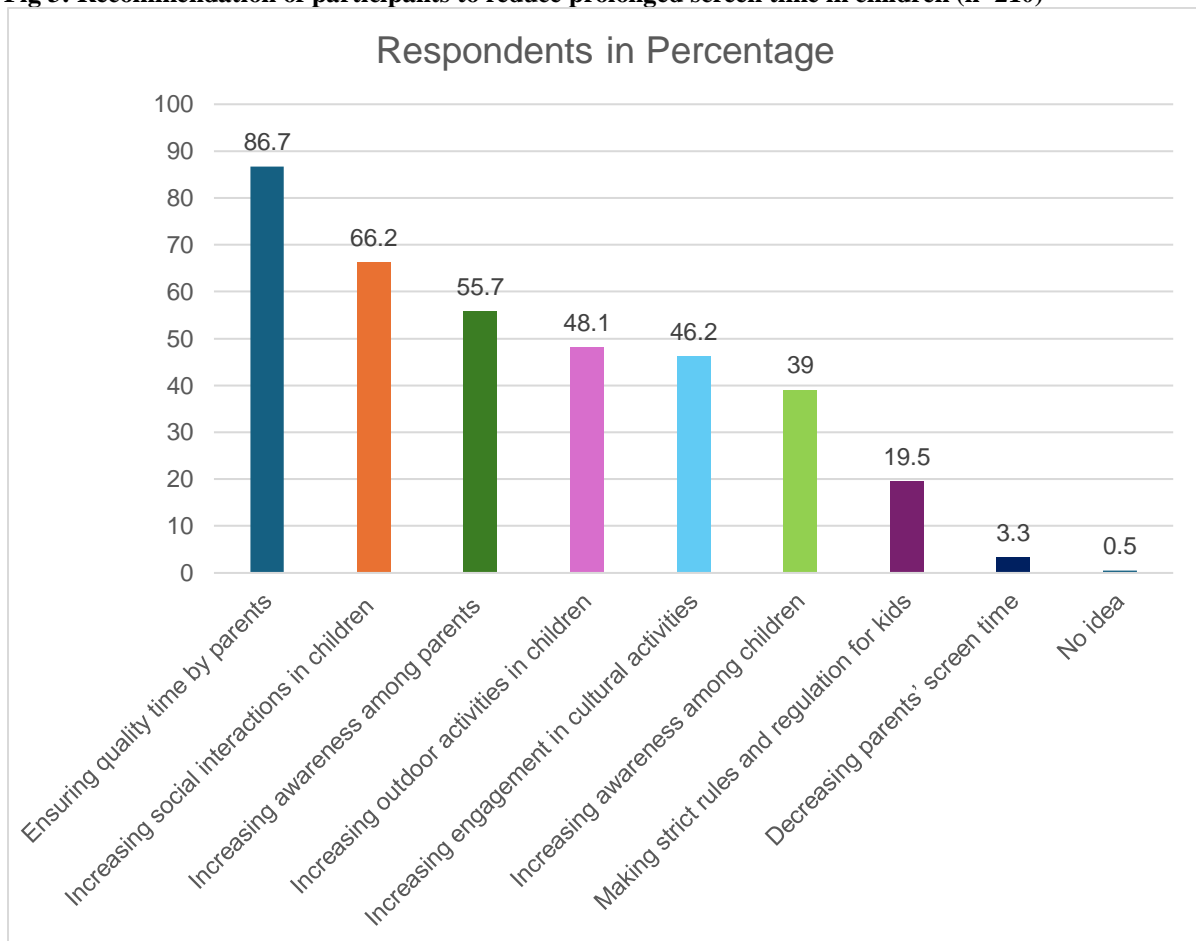
**Table 4: Estimated adverse effects in children due to prolonged screen time (n=210)**

Side effects addressed by respondents	Respondents (in percentage)
Reduced Physical activity	74.3
Vision problem	71.0
Behavioral problem	67.6
Sleep related problem	49.0
Overweight and obesity	48.1
Poor social interaction	42.9
Life-style related disease in childhood	41.0
Anxiety	38.6
Poor interpersonal relationship	36.7
Overeating	35.2
Hyperactivity	34.8
Life-style related disease in adulthood	33.8
Inattention	25.2
Poor self esteem	22.4
No side effect	1.4

**Fig 2: Estimated Benefits of screen use in children (n=210)**



**Fig 3: Recommendation of participants to reduce prolonged screen time in children (n=210)**



**DISCUSSION**

Prolonged screen time and media indulgence have raised concerns regarding its intricate connection to children's psychological well-being and overall health effects. This study was conducted to have an insight to

the perception of individuals regarding screen time habits in children. Consistent with numerous studies, ours examined the demographic characteristics including the age range of parents and non-parent individuals of both genders, their academic



qualifications, and socio-economic status, the nature of the family and number of kids (Table 1).<sup>[9,19]</sup>The age group of participants spanned from 25 to 45 years old, suggesting that the study encompassed both young and older individuals. The educational attainment standard of the responders coming mostly from middle-income families ranged from completing higher secondary school to postgraduation. Occupation varied from govt. job to unemployment and 11.9% of individuals were from the non-parent group.

For over a year, COVID-19 lockdowns have led to the complete closure of schools for more than 168 million children worldwide. As a result, traditional classrooms have transitioned to online platforms like Zoom, and physical activities have shifted to online games. This shift has heightened parental concerns about the duration their children spend on social media and playing online games.<sup>[19]</sup>In our research, when participants were questioned about the impact of the COVID-19 outbreak on children's mental health, females exhibited significant concern regarding this fundamental issue (Table 2). This research discovered that both male and female participants held similar perceptions regarding the negative impacts of prolonged screen time on child development and the importance of restricting screen time for their children. Delayed speech is an important adversity of prolonged screen time among others. This alignment mirrors findings from other global studies.<sup>[20,21]</sup>

In the past few decades, the accessibility of communication media has increased substantially in Bangladesh. A study conducted in Bangladesh revealed that maternal engagement with mass media was linked to impeding children's development.<sup>[22]</sup>Parents in various research studies have highlighted the importance of regulating the contents children consume on screens, similar to our findings. Yet, they are enthusiastic about providing educational content to their children, acknowledging its significance in acquiring essential skills relevant to using technology.<sup>[16,21,22]</sup>Covolo and his team expressed interest in the co-viewing of media by children and their parents as a strategy to avoid exposure to inappropriate content. In our study, female participants were more focused on this issue than males though the result was insignificant.<sup>[12]</sup>In this research, male participants showed a stronger inclination towards the concept of enrolling children in school at an earlier age to diminish screen time, a notion also corroborated by other authors (Table 2).<sup>24</sup>Aligning with prior research, a significant number of male participants in this study believed that the amount of time parents spend on screens influences children's screen time, which in turn is connected to children's developmental progress.<sup>[23,24]</sup>

Parents holding negative views regarding the use of smart technologies (such as concerns about adverse media effects) are significantly inclined to enforce limited screen time for their children. Conversely,

those with positive perceptions tend to allow increased screen time for their children.<sup>[9]</sup>Again some authors from Singapore found that increased parental awareness was correlated with reduced screen time among children aged 2 years and younger.<sup>[25]</sup>However, Schwarzer and his team discovered no direct link between children's development and extensive media consumption by mothers.<sup>[26]</sup>

Knowledge of the respondents about international guidelines for screen time in children (not >1 hour/day for 2-5 years old and no screen time for infants <2 years of age) was assessed in this study (Table 3).<sup>[2]</sup>Here, a significant proportion of participants had no idea about this guideline and this finding aligns with findings from various international studies. Most researchers voiced about initiating robust steps arranged by health care and educational professionals in educating the parents. This education should cover not only the negative effects of prolonged screen time but also the internationally recommended guidelines.<sup>[3]</sup>Male participants of our study had significantly poor knowledge about the guideline which might be related to the fact that they are less involved with childcare. In addition, the level of knowledge was assessed among overseas participants. Nevertheless, no significant association was revealed between residents and non-residents, and future research might be planned in Bangladeshi organizations in collaboration with overseas participants.

Multiple studies discovered that the knowledge about screen time guidelines is poor in low-income and middle-class families, where Shirley and his team acknowledged the lack of educational attainment as a reason behind this deficit.<sup>[3,12]</sup>In our study, academic qualifications were not related strongly to this knowledge and nearly all the participants came from middle to upper-middle socioeconomic backgrounds. Interestingly, government employees exhibited a noteworthy lack of understanding regarding screen time guidelines in our study. This finding warrants close monitoring in future research, and recommendations should be developed by national organizations and disseminated widely at grassroots levels. In contrast, another study found that professionals and graduates demonstrated a higher level of awareness about the guidelines.<sup>[3]</sup>Although our research did not reveal a notable correlation between parental knowledge and family size, a European study found that parents with two children exhibited statistically significant awareness regarding the emotional, mental, and behavioral risks linked to their children's screen time.<sup>[27]</sup>

According to other published findings, this study showed that the screen has been used mostly as a pacifier and allowed the children to calm or distract them. Devices serve as a replacement for caregivers and reduce distress, particularly in working mothers (Fig 1).<sup>[12]</sup>Furthermore, numerous research findings



suggest a connection between the way of parenting and the amount of time young children spend in front of screens. Children from households with authoritarian parenting styles typically exhibit reduced screen time compared to those from families employing indulgent or neglectful parenting approaches. Mothers especially prefer their kids to become engaged with the screen to take a break and relax, drive the car, accomplish household tasks, and many more. The use of screens during meals and bedtime is the most common practice among mothers while watching screens before sleep is strongly prohibited by international guidelines.<sup>[3,29]</sup> Again, the scarcity of playgrounds in urban serves as a significant factor in confining children indoors, leading to greater attachment to digital devices. The COVID-19 pandemic and subsequent lockdown measures, along with the shift to online classes, had a global impact on children, resulting in a significant increment in their use of digital screens.<sup>[19]</sup> In our study, the participants claimed this lockdown was an important precursor for screen dependency in children. Consistent with various national and international studies, increased availability of screens and diverse media contents, increasing trend of nuclear families, and peer pressure were documented in our research among other reasons for screen dependency in children.<sup>[14,15]</sup>

With the rise of virtual learning opportunities and eventually more usage of computer and smartphone screens at close distances myopia has been established as a major global public health and economic problem nowadays. A few authors expressed that the amount of time spent in front of screens has doubled for both kids and parents compared to the pre-pandemic situation.<sup>[29]</sup> Vision problem was an important concern of the participants of this study. (Table 4) In recent times, childhood obesity has emerged as a significant global concern, and it seems to play a significant role in the development of many life-style related childhood diseases.<sup>[3]</sup> Both the negative impacts as well as reduced physical activity due to prolonged screen time were significant focal points of concern in this study (Table 4). A myriad of adverse effects related to prolonged screen time has been documented by many researchers regarding child development and behavior, including speech delay, aggression, attention deficit hyperactive disorder (ADHD), tantrums, increased impulsivity, autism, and impaired learning.<sup>[3,11,12,13]</sup> Engagement in recreational screen activities is widespread among adolescents leading to mental illness, notably social isolation, relationship difficulties, poor self-esteem, anxiety, depression, and even suicidal tendencies.<sup>[15,19,21]</sup> Although the behavioral problems were not mentioned in detail by the respondents in our study, anxiety, hyperactivity, and poor interpersonal relationships were quoted by some of them (Table 4). Many more elaborative leading questions in future studies might explore the arena of behavioral issues in children due to screen

addiction. Henceforth, we need to broaden our vision to consider additional social consequences resulting from prolonged screen exposure, as highlighted by other researchers. These include acts of moral turpitude, drug abuse, impaired security, cyberbullying, and so forth.<sup>[13,30]</sup>

When the participants in our study were asked about the benefits of screen use in children, most of them mentioned learning opportunities with updated information as in other studies (Fig 2). Finally, a significant number of our participants expressed that children's engagement with screens offers relief to the parents. Mothers are mostly engaged in childcare responsibilities, and they permit their children screen time while accomplishing household chores.<sup>[12,20,28]</sup> Parents play a powerful role in controlling their children's media use and molding their development since early childhood. Therefore, many authors recommended focusing on parental actions as the primary method to reduce screen time in children. Providing quality time to the offspring, prompting children to do something else like involving in cultural activities, playing outdoor or indoor games, exposing them to the real world, monitoring time and contents of the screen, setting limits and strict rules, avoiding the use of gadgets as babysitters, etc. are the recommendations documented by parents in different studies.<sup>[14,21,23]</sup> The participants of our study talked almost the same (Fig 3). In addition, our participants strongly emphasized the importance of raising awareness among parents and children regarding the international recommendations for screen usage.

Nevertheless, more observational data on parents' and children's time spent on devices, the types of media they use, and direct evidence of the adverse effects should be sought on a larger scale comparing different geographic areas, to identify appropriate parental interventions in managing children's screen time.

## STRENGTHS AND LIMITATIONS

The main strength of this research was the large sample size for a qualitative study. Limiting the study sample to educated and affluent individuals could potentially strengthen the interpretations, as this demographic is often viewed as more attuned, and their perspectives regarding screen use are presumed to be more refined compared to those who are less privileged. Still, the magnitude of the scenario may not be adequately represented when the educational level or economic status is limited to a specific demographic. Another significant strength of the study is its inclusion of non-parent respondents, whereas most similar research has focused solely on parents. This was based on the belief of the researcher that individuals with a strong understanding of parenting are likely to become effective parents in the future. The study's design enabled the participants to express their thoughts freely regarding the reasons, benefits, and adverse effects of screen time. Moreover, they

could contemplate recommendations drawn from their firsthand experiences, which are additional strengths of this research.

The respondents of this study were purposively selected by the researcher based on convenience and accessibility; therefore they are not representative of the general population. The study attempted to incorporate individuals who were not residents of Bangladesh to establish a meaningful comparison of knowledge on an international scale. Unfortunately, a few of the overseas participants agreed to participate in this research work; hence, the geographic and cultural distribution was limited. Finally, the study focused on participants primarily from working backgrounds who were not directly involved in childcare. Consequently, future research could broaden its scope by including actual caregivers such as grandparents, babysitters, and school educators to explore additional facets of outcomes.

Nevertheless, this study can give a proper direction for the follow-up research employing both qualitative and quantitative methods with a wider range of demographic populations to learn more about individuals' awareness and attitude towards screen time in children. This will encourage parents to deal with the emerging problem of prolonged screen time in children by practicing appropriate guidelines. Further studies can be conducted to identify the problems due to the impact of screen time on children.

## CONCLUSION

Since we are heading towards the transformation of our country into 'Smart Bangladesh' by 2041, our children should be groomed to achieve the vision of becoming smart citizens. Nevertheless, despite exploring digital opportunities, well-designed media campaigns should be propagated targeting parents and children to spread awareness regarding aberrant or excessive screen time. This study attempted to extract individuals' insight towards screen time habits in children and discovered a lower-than-expected level of knowledge regarding international guidelines. Hence, policymakers can aid in the development of specific guidelines for screen time at the national level to promote healthy on-screen and off-screen activities.

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